TITLE 326 AIR POLLUTION CONTROL BOARD

DRAFT RULE
#98-235(APCB)

DIGEST

Adds 326 IAC 10-0.5-1 concerning general definitions for nitrogen oxide rules and 326 IAC 10-2 concerning statewide nitrogen oxide reductions. Amends 326 IAC 10-1-1 concerning applicability under the rule for nitrogen oxides control in Clark and Floyd counties. Repeals 326 IAC 10-1-2 concerning definitions for nitrogen oxides control in Clark and Floyd counties. Effective 30 days after filing with the secretary of state.

HISTORY

First Notice of Comment Period: November 1, 1998, Indiana Register (22 IR 553).

Second Notice of Comment Period and Notice of First Hearing: May 1, 1999, Indiana Register (22 IR 2648).

Notice of Rescheduled Hearing: July 1, 1999, Indiana Register (22 IR 3134).

Republished Second Notice of Comment Period and Notice of First Hearing: February 1, 2000 (23 IR 1197).

Notice of Rescheduled Hearing: March 1, 2000, Indiana Register (23 IR 1418).

Notice of Change in Public Hearing: July 1, 2000, Indiana Register (23 IR XXX).

326 IAC 10-0.5
326 IAC 10-1-1
326 IAC 10-1-2
326 IAC 10-2

SECTION 1. 326 IAC 10-0.5 IS ADDED TO READ AS FOLLOWS:

Rule 0.5. General Provisions

326 IAC 10-0.5-1 Definitions

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-11-2; IC 13-15; IC 13-17

Sec. 1. For purposes of this article, the definition given for a term in this article shall control in any conflict between 326 IAC 1-2 and this article. In addition to the definitions provided in IC 13-11-2 and 326 IAC 1-2, the following definitions apply throughout this article, unless expressly stated otherwise:

(1) "Actual emissions" means a facility's emissions to the atmosphere that were measured or calculated for the baseline year.

(2) "Affected facility" means any facility described in 326 IAC 10-1-1(a)(2) or 326 IAC 10-1-1(a)(3).
(3) "Affected source" means any source described in 326 IAC 10-1-1(a)(1).
(4) "Baseline year" means the most recent calendar year prior to June 12, 1996, for which available data are complete, accurate, and representative of normal operations.
(5) "Baseline season" means the most recent control period prior to the effective date of 326 IAC 10-2 for which available data are complete, accurate, and representative of normal operations.
(6) "Blast furnace gas" means a byproduct gas of iron manufacturing at blast furnaces. The gas is cleaned to minimize the particulate content prior to combustion in equipment, such as boilers and furnaces.
(7) "Boiler" means an enclosed combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.
(8) "Clinker" means a product produced in a portland cement kiln, which is then proportioned with additives and ground into a fine powder called portland cement.
(9) "Coal" means all solid fuels classified as anthracite, bituminous, sub-bituminous, or lignite by the American Society of Testing and Materials (ASTM) Designation D 388-95*, coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to, solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition.
(10) "Coal-fired steam generating unit" means a facility or unit that, for the purpose of fuel switching in this rule, derived ninety percent (90%) or more of its total heat input from combustion of coal in the baseline year or baseline season.
(11) "Coke oven gas" means a byproduct gas of coke manufacturing. The gas may or may not be desulfurized prior to combustion in equipment, such as boilers or heaters.
(12) "Combined cycle system" means a system comprised of one (1) or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.
(13) "Combustion turbine" means an enclosed device that is comprised of a compressor, a combustor, and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, causing the turbine shaft to rotate.
(14) "Control period" means the period beginning May 1 of a year and ending on September 30 of the same year, inclusive.
(15) "Distillate oil" means fuel oil that contains five-hundredths weight percent (0.05%) or less nitrogen and complies with the specifications for fuel oil number 1 or 2 as defined by ASTM D 396-92*, Standard Specifications for Fuel Oil.
(16) "Dry bottom boiler" means a boiler that has a furnace bottom temperature below the ash melting point and from which the bottom ash is removed as a solid.
(17) "Electric output" means the electric generation (in MWh/time) from an electric generating device. With respect to a unit, "electric output" means the electric generation (in MWh/time) from an electric generating device served by the unit and that is attributed to the unit.

(18) "Electricity generating unit (EGU)" means a boiler, combustion turbine, or combined cycle system that is constructed for the purpose of supplying more than one-third (a) of its potential electric output capacity to any utility power distribution system for sale.
(19) "Gas" means the following:
(A) For the purpose of 326 IAC 10-1, natural gas.
(B) For the purpose of 326 IAC 10-2, the following:
(i) Propane.
(ii) Natural gas.
(iii) Coke oven gas.
(iv) Blast furnace gas.
(v) Landfill gas.
(vi) Refinery gas.
(vii) Any combination of items (i) through (vi).
(20) "Gas-fired steam generating unit" means a facility or unit that, for the purpose of fuel switching in this rule, derived ninety percent (90%) or more of its total heat input from combustion of gas in the baseline year or baseline season.
(21) "Gross output" means the total output of energy from a process before making any deductions for energy output used in any way related to the production of energy through that process.
(22) "Industrial, commercial, or institutional steam generating unit" means a unit that produces steam or hot water primarily to supply power, heat, or hot water to any industrial, commercial, or institutional operation, including boilers used by electric utilities that are not utility steam generating boilers.
(23) "Landfill gas" means the gas generated by the decomposition of organic waste deposited in a municipal solid waste landfill or derived from the evolution of organic compounds in the waste.
(24) "Natural gas" means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases originally obtained from geologic formations beneath the earth's surface, of which the principal constituent is methane.
(25) "Nitrogen oxides" or "NO_x" means all oxides of nitrogen, including, but not limited to, nitrogen oxide and nitrogen dioxide, but excluding nitrous oxide, collectively expressed as nitrogen dioxide.
(26) "Non-emitting generating system" means a system for generating electricity using an energy source that does not involve combusting fuel, such as hydroelectric, solar, or wind power, and using an electric generator. No air pollutants are emitted while the generator generates electricity.
(27) "Oil" means crude oil or petroleum, or liquid fuel derived from crude oil or petroleum, and includes distillate oil and residual oil.
(28) "Oil-fired steam generating unit" means a facility or boiler that, for the purpose of fuel switching in this rule, derived ninety percent (90%) or more of its total heat from combustion of oil in the baseline year or baseline season.
(29) "Operating day" means a twenty-four (24) hour period between midnight (12 a.m.) and

the following midnight during which any facility combusts fuel or produces intermediate or final products. It is not necessary for the facility to operate continuously for the entire twenty-four (24) hour period.

(30) "Overfeed stoker" means a boiler design that employs a moving grate assembly where the coal is fed into a hopper and then onto a continuous grate that conveys the coal into the furnace. As coal moves through the furnace, it passes over several air zones for staged burning.

(31) "Owner or operator" means any person who owns, leases, controls, operates, or supervises any unit ~~or~~, facility, <u>or source</u> subject to this article.

(32) "Portland cement dry preheat process kiln" means a reaction vessel that receives dried raw material from a preheater and calcines and sinters the dried raw material into a product called cement clinker.

(33) "Portland cement long dry kiln" means a reactive vessel that dries, calcines, and sinters raw materials into a product called portland cement clinker.

(34) "Portland cement plant" means any facility that manufactures portland cement by either the wet or dry process.

(35) "Potential emissions" means a facility's potential emissions as defined in 326 IAC 1-2-55 for the baseline year.

(36) "Propane" means a heavy, flammable, gaseous, paraffin hydrocarbon, C_3H_8, found in crude petroleum and natural gas and used as fuel and in chemical synthesis.

(37) "Refinery gas" means a gas that is generated at a petroleum refinery and that is combusted in equipment, such as process heaters and boilers. Refinery gas does not include gas generated by catalytic cracking units, generators, or fluid coking burners or gas generated by a refinery process unit during start-up, shut-down, and upset or malfunction conditions.

(38) "Residual oil" means crude oil and fuel oil that do not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 3, 4, and 6 as defined by ASTM D 396-92*, Standard Specifications for Fuel Oils.

(39) "Spreader stoker" means a boiler design where mechanical or pneumatic feeders distribute coal uniformly over the surface of a moving grate.

(40) "Tangentially-fired boiler" means a boiler that has coal and air nozzles mounted in each corner of the furnace where the vertical furnace walls meet. Both pulverized coal and air are directed from the furnace corners along a line tangential to a circle lying in a horizontal plane of the furnace.

(41) "Thirty (30) day rolling average" means an emission rate calculated each operating day by averaging all the preceding thirty (30) successive operating days average emission rates.

(42) "Unit" means, for the purpose of 326 IAC 10-2, one (1) of the following:

(A) A boiler.

(B) A combustion turbine.

(C) A combined cycle system.

(43) "Utility steam generating unit" means any facility or unit that is constructed for the

purpose of supplying more than one-third (a) of its potential electric output capacity and more than twenty-five (25) megawatts of electric output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electric energy for sale is also considered in determining the electric energy output capacity of the affected facility.
(44) "Wall-fired boiler" means a boiler that has pulverized coal burners arranged on the wall of the furnace. The burners have discrete, individual flames that extend perpendicularly into the furnace area.
(45) "Wet bottom boiler" means a boiler that has a furnace bottom temperature above the ash melting point and from which the bottom ash is removed as a liquid.

***Copies of the Code of Federal Regulations (CFR) and American Society of Testing and Materials Designation (ASTM) D 388-95 (January 15, 1995) and ASTM D 396-92 (October 15, 1992) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.** *(Air Pollution Control Board; 326 IAC 10-0.5-1)*

SECTION 2. 326 IAC 10-1-1 IS AMENDED TO READ AS FOLLOWS:

326 IAC 10-1-1 Applicability
Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11; IC 13-17-3-12
Affected: IC 13-15; IC 13-17

Sec. 1. (a) Emissions of nitrogen oxides (NO_x) from **sources and** facilities located in Clark or Floyd County shall be controlled as follows, unless alternative limitations and requirements have been established in a Part 70 permit in accordance with 326 IAC 2-7-24. Any proposal to establish an alternative limitation or requirement other than the streamlining of multiple requirements shall be in accordance with section 4(c)(1) of this rule:

(1) Any stationary source located in Clark or Floyd County that exists on or before ~~the effective date of this rule~~ **June 12, 1996** and that emits or has the potential to emit greater than or equal to one hundred (100) tons per year or more of NO_x from all facilities at the source shall apply reasonable available control technology (RACT) as set forth in this rule.

(2) Any facility that exists on or before ~~the effective date of this rule~~ **June 12, 1996** that has the potential to emit NO_x greater than or equal to forty (40) tons per year and that is located at a source that emits or has the potential to emit NO_x greater than or equal to one hundred (100) tons per year, shall comply with the applicable provisions of this rule.

(3) Facilities requiring a permit under 326 IAC 2 that are constructed, modified, or reconstructed after ~~the effective date of this rule~~ **June 12, 1996** and to which a new source performance standard (NSPS) does not apply shall comply with this rule or best available control technology (BACT), whichever is more stringent.

(b) Unless emissions have been limited in accordance with subsection (c), the emission limitations established in section 4 of this rule shall apply to the following facilities at sources meeting the requirements of subsection (a)(1):

(1) Each electric utility steam generating unit of the type listed in section 4(b)(2) of this rule with heat input capacity greater than or equal to two hundred fifty (250) million Btu per hour.

(2) Each industrial, commercial, or institutional steam generating unit of the type listed in section 4(b)(3) of this rule with heat input capacity greater than or equal to one hundred (100) million Btu per hour.

(3) Each portland cement long dry kiln with production capacity greater than or equal to twenty (20) tons of clinker per hour.

(4) Each portland dry preheat process kiln with production capacity greater than or equal to twenty (20) tons of clinker per hour.

(5) Any other type of facility that emits or has the potential to emit NO_x greater than or equal to forty (40) tons per year.

(c) A facility identified in subsection (b) shall not be subject to the emissions limits of section 4 of this rule if the source's actual emissions have been limited to below one hundred (100) tons per year through federally enforceable production or capacity limitations in an operating permit in accordance with section 3(2) of this rule and 326 IAC 2-8 on or before December 14, 1996.

(d) A facility that exists on or before ~~the effective date of this rule~~ **June 12, 1996** that is subject to a NSPS under 40 CFR 60* that affects emissions of NO_x is not subject to this rule.

(e) Beginning May 1, 2003, and each year thereafter, a source or facility that is subject to this rule and 326 IAC 10-2 shall comply with the more stringent rule during the control period.

*Copies of 40 CFR 60, New Source Performance Standards for New Stationary Sources, may be obtained from the Government Printing Office, Washington, D.C. 20402 are available for copying at the Indiana Department of Environmental Management, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46204-2220. *(Air Pollution Control Board; 326 IAC 10-1-1; filed May 13, 1996, 5:00 p.m.: 19 IR 2869; filed Apr 22, 1997, 2:00 p.m.: 20 IR 2370)*

SECTION 3. 326 IAC 10-2 IS ADDED TO READ AS FOLLOWS:

Rule 2. Indiana Nitrogen Oxides Reduction Requirements

326 IAC 10-2-1 Applicability

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) Except as provided in subsection (b), this rule applies as follows:

(1) An electricity generating unit serving a generator with a nameplate capacity greater

than twenty-five (25) megawatts shall comply with all of the following:

(A) The emission limits under section 2(a) of this rule.

(B) The monitoring and testing requirements under section 4 of this rule.

(C) The record keeping and reporting requirements under section 5 of this rule.

(2) An industrial, commercial, or institutional steam generating unit that has heat input capacity greater than two hundred fifty million (250,000,000) Btu per hour shall comply with all of the following:

(A) The emission limits under:

(i) section 2(b) of this rule, if the unit combusts only one (1) fuel;

(ii) section 2(c) of this rule, if the unit combusts more than one (1) fuel simultaneously at any time during the control period; or

(iii) section 2(d) of this rule, if the unit combusts a fuel other than coal, oil, or gas.

(B) The monitoring and testing requirements under section 4 of this rule.

(C) The record keeping and reporting requirements under section 5 of this rule.

(b) The requirements of this rule shall not apply to the following:

(1) A unit under subsection (a) that operates under a federally enforceable permit that includes terms and conditions that restrict the unit's actual nitrogen oxides (NO_x) emissions to less than or equal to twenty-five (25) tons during the control period ~~of each year~~, beginning May 1, 2003 and each year thereafter.

(2) An electricity generating unit serving a generator with a nameplate capacity less than or equal to twenty-five (25) megawatts.

(3) An industrial, commercial, institutional steam generating unit that has either of the following:

(A) A nameplate heat input capacity less than or equal to two hundred fifty million (250,000,000) Btu per hour; or

(B) A heat input capacity limited to less than or equal to two hundred fifty million (250,000,000) Btu per hour in a federally enforceable permit.

(4) Municipal waste combustors.

(5) ~~If~~ A unit that becomes subject to final and effective NO_x emission reduction requirements under Section 126 of the Clean Air Act (CAA)* that require compliance by or before May 2003~~, the unit shall be exempt from this rule~~, except that the unit may be included in an averaging plan under section 3(a)(3) or 3(a)(4) of this rule .

(c) A new unit that begins operation after January 1, 2001 and is subject to a New Source Performance Standard (NSPS) under 40 CFR 60* shall comply with this rule or the NSPS, whichever is more stringent.

***Copies of the Clean Air Act (CAA) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46204.** *(Air*

Pollution Control Board; 326 IAC 10-2-1)

326 IAC 10-2-2 Emission limits
Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 2. (a) Except as provided in section 3 of this rule, the owner or operator of an electricity generating unit serving a generator with a nameplate capacity greater than twenty-five (25) megawatts shall not allow NO_x emissions greater than twenty-five hundredths (0.25) pound per million British thermal units (Btu) during the control period ~~of each year~~ beginning in 2003 and each year thereafter.

(b) Except as provided in section 3 of this rule, the owner or operator of an industrial, commercial, institutional steam generating unit that has heat input capacity greater than two hundred fifty million (250,000,000) Btu per hour and does not simultaneously combust a mixture of coal, oil or gas shall not allow NO_x emissions greater than the following during the control period ~~of each year~~ beginning in 2003 and each year thereafter:

Unit Type	Fuel Type	Emission Limit (lb/million Btu input)
Coal fired (non-fluidized bed combustion)	Coal	0.4
Coal fired (fluidized bed combustion)	Coal	0.35
Oil fired	Distillate oil	0.2
	Residual oil	0.3
Gas fired	Gas	0.2

(c) Except as provided in section 3 of this rule, the owner or operator of an industrial, commercial, institutional steam generating unit that has heat input capacity greater than two hundred fifty million (250,000,000) Btu per hour that simultaneously combusts a mixture of coal, oil, or gas at any time during the control period of any year beginning in 2003 and each year thereafter shall comply with emission limits determined by the following equation:

$$E = (A \times E1 + B \times E2 + C \times E3) / (A + B + C)$$

Where: E = The NO_x limit expressed as pounds per million Btu.
A = Heat input in million Btu from combustion of coal.
B = Heat input in million Btu from combustion of oil.
C = Heat input in million Btu from combustion of gas.
E1 = Applicable emission limit in subsection (b) in pounds per million Btu for coal.
E2 = Applicable emission limit in subsection (b) in pounds per million Btu for oil.
E3 = Applicable emission limit in subsection (b) in pounds per million Btu for gas.

(d) Except as provided in section 3 of this rule, the owner or operator of an industrial,

commercial, institutional steam generating unit that has heat input capacity greater than two hundred fifty million (250,000,000) Btu per hour who intends to combust a fuel other than coal, oil, or gas at any time during the control period of any year beginning in 2003 and each year thereafter ~~may~~ shall submit a request for a determination of an allowable emission rate in pounds per million Btu as follows:

(1) The request shall be submitted to the department for approval and incorporation into the source's operating permit in accordance with the applicable procedures in 326 IAC 2.

(2) The request shall be submitted two hundred seventy (270) days prior to May 1, 2003 and one hundred twenty (120) days prior to using the fuel or fuels after May 1, 2003.

(3) The request shall include the following:

(A) A description of the fuels to be combusted.

(B) Composition of the fuels, including nitrogen content.

(C) Uncontrolled emission rate in pounds per million Btu, including method of estimation.

(D) A proposed emission rate in pounds per million Btu that provides that the emissions are controlled:

(i) by sixty percent (60%) from uncontrolled emissions; or

(ii) if the source can demonstrate that a sixty percent (60%) reduction is not reasonably achievable, an alternative level with the application of reasonably achievable control technology (RACT).

(E) Documentation that the emission rate will be consistently achieved at various control measure and unit operating conditions such as loads, combustion temperature, and excess air.

Notwithstanding clause (D), an emission rate determined under this subsection shall not be less than two-tenths (0.2) pound per million Btu.

(e) Beginning May 1, 2003, emission limits shall be complied with on ~~a Btu-weighted average basis~~ an ozone season basis beginning on May 1 and ending on September 30 of each year as follows:

~~(1) A monthly average for the period May 1 through May 30.~~

~~(2) A thirty (30) day rolling average for the period May 31 through September 30.~~

(1) For individual unit compliance, units not otherwise using the emissions averaging provisions under section 3 of this rule, the average shall be based on the average of individual operating hourly averages reported during the period using applicable monitoring requirements under section 4 of this rule.

(2) For units in an averaging plan pursuant to section 3 of this rule, compliance shall be determined on a Btu-weighted or MWh average in accordance with the procedures in section 3 of this rule.

(f) The owner or operator of a unit or units subject to this rule may request and the commissioner may grant a one (1)-time one (1) year extension of the compliance date if the owner or operator does the following:

(1) Implements emissions reductions during a control period prior to May 1, 2003 as

follows:

(A) The emissions reduction shall not be required by Indiana's state implementation plan (SIP), any other state law or rule, or be otherwise required by the Clean Air Act (CAA).

(B) The emissions reduction must be verified by the source as actually having occurred during a control period prior to May 1, 2003 and the source has maintained the reductions.

(C) The owner or operator documents that one (1) of the following applies:

(i) If compliance is based on emission averaging, the NO_x emission rate after the reduction is less than sixty-five percent (65%) of the baseline season NO_x emission rate or equal to the applicable emission limit, whichever is less stringent.

(ii) If compliance is based on individual unit compliance, the owner or operator has installed and operated NO_x control measures on at least seventy-five percent (75%) of the units that would require control measures to comply with the rule. If the calculation does not result in a whole number, the results shall be rounded down to a whole number.

(D) The owner or operator shall submit the request by November 1, 2002.

(2) Includes with the extension request a schedule of activities to achieve compliance with this rule. An approval of the extension request shall include the compliance schedule. Failure to meet a compliance schedule shall be a violation of this rule.

(Air Pollution Control Board; 326 IAC 10-2-2)

326 IAC 10-2-3 Compliance procedures

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 3. (a) An owner or operator may comply with this rule in one (1) of the following ways:

(1) Complying with the emission limits in section 2 of this rule for each unit.

(2) For industrial, commercial, or institutional steam generating units subject to this rule, complying with an emission limit based on a fuel switching program. Provisions applicable to fuel switching are as follows:

(A) Fuel may be switched as follows:

(i) A coal fired steam generating unit may combust oil, gas, or a simultaneous combination of oil and gas during the control period. The steam generating unit shall comply with the applicable limit for coal combustion during the control period.

(ii) An oil fired steam generating unit may combust oil with a lower NO_x emitting potential, gas, or a simultaneous combination of oil and gas during the control period. The steam generating unit shall comply with the applicable limit for oil combustion during the control period.

(B) The owner or operator shall prepare a fuel switching plan addressing the following information and submit the plan to the department in accordance with subsection (b):

(i) Date the plan will be implemented.

(ii) Identification of each steam generating unit to be included in the fuel switching program.

(iii) For each steam generating unit in the fuel switching program, the following information:

(AA) Type of steam generating unit.

(BB) Fuels that are currently combusted and those that will be combusted under the plan.

(CC) Emission rate for each fuel, including basis, expressed as pounds per million British thermal unit (lb/mmBtu), and the amount of heat that will be derived from each fuel, expressed as million Btu (mmBtu).

(DD) If the owner or operator does not intend to use the alternate fuel or fuels for the entire control period, the period of time during the control period in which each fuel shall be used.

(EE) A demonstration that the fuel Btu weighted average emission rate shall not exceed the applicable emission limit using the following equation:

EL = (E1 × H1 + E2 × H2 +...) / (H1 + H2 +...)

Where: EL = Applicable emission limit, expressed in pounds per million Btu.

E1, E2,... = Emission rate of alternative fuels 1, 2, 3, ..., expressed in pounds per million Btu.

H1, H2,... = Amount of heat derived from alternative fuels 1, 2, 3, ..., expressed in million Btu per year.

(FF) Monitoring and record keeping procedures <u>in accordance with sections 4 and 5 of this rule</u>.

(GG) Procedures that shall be used to demonstrate compliance with the emission limits during the fuel switching period <u>in accordance with sections 4 and 5 of this rule</u>.

(3) Instead of complying with the emission limits in section 2 of this rule on a unit-by-unit basis, complying with an <u>lb/mmBtu</u> emission limit based on an approved emissions averaging plan. Any unit included in an averaging plan may be included in only one (1) averaging plan. An emissions averaging plan shall require the following:

(A) All the sources and units participating in the averaging plan are located in Indiana. ~~and under the control of the same owner or operator.~~

(B) <u>Except for units venting to a common stack and emissions are monitored at the stack,</u> each unit included in an averaging plan shall have an alternative contemporaneous emission limitation ~~and can only be included in one (1) averaging plan.~~ <u>For units vented to a common stack with emissions monitored at the stack, alternative contemporaneous emission limitations shall be included for the stacks.</u>

(C) Each unit included in an averaging plan shall have the following:

(i) If the unit has an alternative contemporaneous emission limitation more stringent than the unit's applicable emission limitation under section 2 of this rule, a minimum heat input value.

(ii) If the unit has an alternative contemporaneous control period emission limitation

less stringent than the unit's applicable emission limitation under section 2 of this rule, a maximum heat input value.

(iii) If units share a common stack and monitor emissions at the stack, a proposed compliance plan based on averaging stack emission.

(D) The Btu-weighted average emission rate for the units in an averaging plan shall be less than or equal to the Btu-weighted average emission rate for the same units had the units each been operated, during the same period of time, in compliance with the applicable emission limitations in section 2 of this rule.

(E) ~~In order~~ To demonstrate that the proposed plan is consistent with clause (D) the alternative contemporaneous emission limitations and heat input values assigned to the units in the proposed averaging plan shall meet the following:

$$\frac{\sum_{i=1}^{n}\left(R_{Li}\times HI_i\right)}{\sum_{i=1}^{n} HI_i} \le \frac{\sum_{i=1}^{n}\left(R_{li}\times HI_i\right)}{\sum_{i=1}^{n} HI_i}$$

Where: R_{Li} = Alternative contemporaneous emission limitation for unit i, in lb/mmBtu, as specified in the averaging plan.

R_{li} = Applicable emission limitation for unit, in lb/mmBtu, as specified in section 2 of this rule.

HI_i = Heat input for unit i, in mmBtu, as specified in the averaging plan.

n = Number of units in the averaging plan.

(F) When an averaging plan, or a revision to an approved averaging plan, is not approved, the owner or operator of each unit in the plan shall operate the unit in compliance with the emission limitation in section 2 of this rule that would apply in the absence of the averaging plan, or revision to a plan.

(G) A complete averaging plan shall include the following:

(i) Identification of each unit to be included under the plan.

(ii) Each unit's applicable emission limitation in section 2 of this rule.

(iii) The alternative contemporaneous emission limitation for each unit, in lb/mmBtu. If any of the units identified in the averaging plan utilize a common stack and monitors emissions at the stack, the ~~same~~ alternative contemporaneous emission limitation shall be assigned to each ~~unit~~ stack and different heat input limits may be assigned.

(iv) The heat input assigned to each unit, in mmBtu.

(v) The calculation in clause (E).

(vi) The control periods for which the plan will be in effect.

(vii) The provisions of clause (I) or (J).

(viii) The method or methods to be used to determine NO_x emissions and emissions averaging.

(ix) Identification of any measures necessary to control NO_x emissions.

(H) Each unit in an approved averaging plan is in compliance with the emission limitation

under the plan only if the requirements in clause (I) or (J) are met.

(I) For each unit, the unit's actual average emission rate, in lb/mmBtu, is less than or equal to the unit's alternative contemporaneous emission limitation in the averaging plan and the following:

(i) For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in section 2 of this rule, the actual heat input does not exceed the heat input in the averaging plan.

(ii) For each unit with an alternative contemporaneous emission limitation more stringent than the applicable emission limitation in section 2 of this rule, the actual heat input is not less than the heat input in the averaging plan.

(J) If one (1) or more of the units does not meet the requirements under clause (I), the owner or operator shall demonstrate that the actual Btu-weighted average emission rate for the units in the plan is less than or equal to the Btu-weighted emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitation in section 2 of this rule as follows:

(i) A group showing of compliance shall be made based on the following equation:

$$\frac{\sum_{i=1}^{n}\left(R_{ai}\times HI_{ai}\right)}{\sum_{i=1}^{n} HI_{ai}} \le \frac{\sum_{i=1}^{n}\left(R_{li}\times HI_{ai}\right)}{\sum_{i=1}^{n} HI_{ai}}$$

Where: **R_{ai} = Actual average emission rate for unit i, in lb/mmBtu.**
R_{li} = Applicable emission limitation for unit i, as specified in section 2 of this rule.
HI_{ai} = Actual heat input for unit i, in mmBtu.
n = Number of units in the averaging plan.

(ii) For units with an alternative emission limitation, R_{li} shall equal the applicable emission limitation under section 2 of this rule, not the alternative emission limitation.

(iii) If there is a showing of compliance based on monitoring stack emissions on common stacks, then all units vented to those stacks shall be considered to be in compliance.

(K) If there is a successful group showing of compliance under clause (J), then all the units in the averaging plan shall be deemed to be in compliance with the units' alternative contemporaneous emission limitations and heat input limits under clause (I).

(4) Instead of complying with the emission limits in section 2 of this rule for electricity generating units on a unit-by-unit basis, complying with an electrical generation output emission limit in pounds per megawatt hour (lb/MWhr) based on an approved emissions averaging plan. Any unit included in an averaging plan may be included in only one (1) averaging plan. An averaging plan may include electrical generation output from non-

emitting generating systems. An output based emissions averaging plan shall include the following:

(A) All the sources and units participating in the averaging plan are located in Indiana.

(B) Identification of the units and any non-emitting generating systems to be included in the averaging plan.

(C) A proposed lb/MWhr emission limit.

(D) A demonstration that the emission limit in subdivision (C) is equivalent to the emission limit in section 2 of this rule. The demonstration shall include, but is not limited to, the following information:

(i) Average electrical generation output in MWhr and net heat rate for the last three (3) control periods.

(ii) Projected heat rate after installation of NO_x controls.

(iii) Projected emission rate, in lb/mmBtu, after installation of NO_x controls.

(iv) The calculation under subdivision (H).

(E) Identification of measures or activities, including non-emitting generating systems, to be used to comply with the proposed emission limit.

(F) Identification of the methods and equipment to be used to monitor compliance with the proposed emission limit, including the following:

(1) The methodology to measure ozone season gross electricity output.

(2) Electricity output data quality assurance and quality control and data validation procedures.

(G) Compliance with the proposed limit shall be demonstrated on a system-wide net electricity output basis using the following equation:

$$\frac{\sum_{i=1}^{n}(E_{ai} \times G_{ai})}{\sum_{i=1}^{n} G_{ai}} \leq \frac{\sum_{i=1}^{n}(E_{li} \times G_{ai})}{\sum_{i=1}^{n} G_{ai}}$$

Where: E_{ai} **= Actual average emission rate for unit i in lb/MWhr**
G_{ai} **= Net electricity output for unit i in MWhr**
n = Number of unit in the averaging plan
E_{li} **= Applicable emission limit for unit i in lb/MWhr**

(H) The emission rates (lb/MWhr) for each unit in the averaging plan shall be calculated using the following equation:

$$E_{ai} \text{ or } E_{li} \text{ (lb/MWhr)} = E_i \times C_1 \times H_i \times C_2$$

Where: E_{ai} **= Actual average emission rate for unit i in lb/MWhr**
E_{li} **= Applicable emission limit for unit i in lb/MWhr**
E_i **= Actual or applicable emission limitation for unit i in lb/mmBtu**

C_1 = 1 mmBtu / 10^6 Btu
H_i = Net heat rate value for unit i in Btu/kWh
C_2 = 1000 kilowatt hours / 1 megawatt hour

The information required in this subsection shall be submitted with the information required under subsection (d).

(b) An owner or operator who elects to comply with an emission limit based on a fuel switching plan developed in accordance with subsection (a)(2) or an emissions averaging plan developed in accordance with subsection (a)(3) or (a)(4), ~~or both,~~ shall submit the plan, and any revisions to the plan, to the department for approval and incorporation into the source's operating permit in accordance with the applicable procedures in 326 IAC 2 and the following:

(1) ~~Except as required under subdivision (3),~~ The owner or operator shall submit an initial averaging or fuel switching plan ~~two hundred seventy (270) days prior to May 1, 2003~~ with the compliance plan under subsection (d).

(2) An initial averaging or fuel switching plan to be implemented after May 1, 2003, and any revisions to an approved averaging or fuel switching plan shall be submitted one hundred twenty (120) days prior to implementation of the plan or plan revision.

~~(3) An owner or operator that intends to use emissions averaging and to achieve early reductions under subsection 2(f) of this rule shall submit the averaging plan with the compliance plan in subsection (d).~~

(c) The department may require verification of the emission rates used by the owner or operator in this section using the quality assurance and data validation procedures under either of the following:

(1) 40 CFR 60*.

(2) 40 CFR 75* and 40 CFR 76.11*.

(d) The owner or operator shall on or before September 1, 2001, submit to the department a compliance plan that includes the following information:

(1) Identification number and type of each unit subject to this rule.

(2) Name and address of the plant where the unit is located.

(3) Name and telephone number of the person responsible for demonstrating compliance with this section.

(4) Identification of the compliance options or combination of compliance options under subsection (a) to be used and the applicable plan.

(5) NO_x reduction measures implementation schedule including the following:

(A) Identification of NO_x reduction measures to be implemented.

(B) Control technology installation schedule including, but not limited to, the following, as applicable:

(i) Engineering, fabrication, and delivery.

(ii) Construction pre-hookup.

(iii) Control technology testing.

(C) Projected source or system average or individual unit emission rate in lb/mmBtu or lb/MWh.

(D) Identification of energy efficiency measures, including any non-emitting generating systems, to be implemented in accordance with subsection (a)(4), if applicable.

(E) For units complying with a lb/MWh emission limit and non-emitting generating systems, description of the monitoring system to measure electric output.

(F) For units using alternative monitoring procedures that monitor steam generating unit operating conditions and predict NO_x emissions, the monitoring plan under section 4(c)(2) of this rule.

(6) For units that will be included in an averaging plan covering units that are owned and operated by several companies, the identification of all owners and operators that will be responsible for complying with this rule.

(e) In the event that separate companies enter into agreements to average NO_x emissions among units owned and operated by separate companies, each owner and operator shall be responsible for complying with the requirements of this rule.

(f) In the event of common ownership, a commonly-owned unit must be included in either the owner's or operator's emission averaging plan under subsection (a)(3) or (a)(4), but not both.

***Copies of the Code of Federal Regulations (CFR) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46204.** *(Air Pollution Control Board; 326 IAC 10-2-3)*

326 IAC 10-2-4 Monitoring requirements

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 4. (a) Beginning with the control period in 2003 and each year thereafter, any owner or operator of an electricity generating unit serving a generator with a nameplate capacity greater than twenty-five (25) megawatts or an industrial, commercial, institutional steam generating unit, that has heat input capacity greater than two hundred fifty million (250,000,000) Btu per hour who has opted-in to the acid rain program under 40 CFR 72* through 75* shall monitor NO_x emissions during the control period of each year using one (1) of the following:

(1) A NO_x continuous emissions monitor system (CEMS) in accordance with 40 CFR 75* and 326 IAC 3, as applicable.

(2) Alternative monitoring procedures, as applicable, under 40 CFR 75, Appendix D and E*.

(b) Beginning with the control period in 2003 and each year thereafter, any owner or operator of a coal fired industrial, commercial, institutional steam generating unit, that has heat input capacity greater than two hundred fifty million (250,000,000) Btu per hour and has not opted-in to the acid rain program under 40 CFR 72* through 75* shall monitor NO_x emissions during the control period of each year using a NO_x CEMS in accordance with 40 CFR 60, Subpart A* and 40 CFR 60, Appendix B*, and comply the quality assurance procedures specified in 40 CFR 60, Appendix F* and 326 IAC 3, as applicable.

(c) Beginning with the control period in 2003 and each year thereafter, any owner or operator of an industrial, commercial, institutional steam generating unit that has heat input capacity greater than two hundred fifty million (250,000,000) Btu per hour, is not a coal fired unit, and has not opted-in to the acid rain program under 40 CFR 72* through 75* shall monitor NO_x emissions during the control period of each year using one (1) of the following means:

(1) A NO_x CEMS in accordance with 40 CFR 60, Subpart A* and 40 CFR 60, Appendix B*, and complies with the quality assurance procedures specified in 40 CFR 60, Appendix F* and 326 IAC 3, as applicable.

(2) Alternative monitoring procedures that monitor steam generating unit operating conditions and predict NO_x emissions according to a plan approved by the department. The plan shall contain the following:

(A) Identification of the specific operating conditions to be monitored and the relationship between these operating conditions and NO_x emission rates. Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion, for example, the ratio of primary air to secondary or tertiary air, or both, and the level of excess air, for example, flue gas oxygen level.

(B) The data and information that the owner or operator used to identify the relationship between NO_x emission rates and these operating conditions.

(C) Identification of the following:

(i) How the operating conditions, including steam generating unit load, will be monitored on an hourly basis by the owner or operator during the period of operation of the unit.

(ii) The quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring the operating conditions will be representative and accurate.

(iii) The type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator.

(3) For units that have an uncontrolled NO_x emission rate that is equal to or less than seventy-five percent (75%) of the applicable NO_x emission rate in section 2 of this rule may propose alternative monitoring procedures based on documentation of fuel type and usage and site-specific testing information.

(d) A CEMS shall be operated and maintained in accordance with an on-site CEMS

operating plan that meets the requirements under 326 IAC 3-5-4. The CEMS operating plan shall be made available to the department and the U.S. EPA upon request.

(e) Any testing done under this section shall be performed in accordance with 326 IAC 3.

(f) The owner or operator of each unit or non-emitting generating system that intends to comply with a lb/MWh emission limit shall install all monitoring systems for monitoring electric output.

***Copies of the Code of Federal Regulations (CFR) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46204.** *(Air Pollution Control Board; 326 IAC 10-2-4)*

326 IAC 10-2-5 Record keeping and reporting requirements
Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 5. (a) Beginning with the control period in 2003 and each year thereafter, any owner or operator of a unit subject to the emission limitations in section 2 of this rule, shall comply with the following record keeping requirements:

(1) Except as provided in subdivision (2), the owner or operator shall maintain all records necessary to demonstrate compliance with this rule on site for a period of five (5) years. The records shall be made available to the department or the U.S. EPA upon request. The owner or operator shall maintain records of the following information for each day the unit is operated during the control period:

(A) Calendar date of record.

(B) The average daily NO_x emissions ~~rate~~ measured or predicted.

~~**(C) For the period May 1 through May 30, the monthly average NO_x emission rate.**~~

~~**(D) For the period May 31 through September 30, the thirty (30) day average NO_x emission rate calculated at the end of each day from the measured or predicted daily emission rates for the preceding thirty (30) days.**~~

~~**(E) Identification of time periods during which NO_x standards are exceeded, the reason for the exceedance, and action taken to correct the exceedance.**~~

(C) Daily heat input, in mmBtu, or gross output, in MWh.

(F) Identification of time periods, except for units that apply 40 CFR 75* data substitution procedures, for which operating conditions and pollutant data were not obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(G) Data, as necessary, to determine compliance with the emission limitations in this rule. The data, as applicable, shall include, but is not limited to, the following:

(i) Fuel type and usage.

(ii) Unit operating conditions.

(iii) Information required under 40 CFR 75, Appendix E*.

(H) Identification of time when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

(2) The owner or operator of multiple sources may maintain records at a centralized location.

(b) ~~If excess emissions occur during the control period,~~ The owner or operator shall submit ~~excess emissions~~ an ozone season emission reports to the department, beginning in 2003 and each year thereafter, including the following:

(1) Unit identification.

(2) ~~Duration of exceedance or exceedances.~~ Applicable emission limit (considering compliance on an individual unit or emission averaging basis).

~~(3)~~ Actual emission rate in lb/mmBtu or lb/MWh.

~~(4) Reason for the exceedances and corrective action taken, if any.~~

The report shall be postmarked, date stamped by a private carrier or hand delivered to the department ~~within thirty (30) days of the end of the calendar month in which the excess emissions occurred~~ by October 31, beginning in 2003 and each year thereafter.

***Copies of the Code of Federal Regulations (CFR) referenced in this rule may be obtained from the Government Printing Office, Washington, D.C. 20402 or are available for copying at the Indiana Department of Environmental Management, Office of Air Management, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46204.** *(Air Pollution Control Board; 326 IAC 10-2-5)*

SECTION 4. 326 IAC 10-1-2 IS REPEALED.